AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the claims

Claim 1 (currently amended): A computer program product for use with a computer system to execute a simulation, comprising:

a plurality of service computer readable program code means, the service program code means configured to collectively determine simulated attributes of objects of an environment under simulated operation <u>wherein the objects are mechanical systems operating in the environment</u>, each service program code means associated with at least a subset of object attributes in an object database and each service program code means executing at a rate independent of the other service program code means <u>wherein the rate is based on the simulated attributes</u>, at least some of the service program code means including computer readable program code means to access and operate upon object attributes, from the object database, with which the service program code means is associated;

write queue computer readable program code means associated with each service program code means that queues write requests from the service program code means to write determined simulated attributes to the object database; and

node computer readable program code means that coordinates execution of the queued requests to cause the determined simulated attributes to be written to the object database in a manner such that each service program code means has a coherent view of all the object attributes.

Claim 2 (original): The program product of claim 1, wherein

the node program code means includes computer readable program code means for creating an image of at least a portion of an object whose attribute is to be written to the object database and for writing the determined simulated attributes to the image; and

to write the determined simulated attributes of the object to the object database, the node program code means associates the image with the object database.

Claim 3 (original): The program product of claim 2, wherein:

the node program code means associates the image with the object database by changing a pointer for the object in the object database to point to the image.

Claim 4 (original): The program product of claim 2, wherein:

the node code program means includes computer readable program code means for notifying at least some of the service program means that the node program code means is associating an image with the object database.

Claim 5 (original): The program product of claim 4, wherein:

in response to a service program code means receiving an object database association notification from a node program code means, the write queue program code means associated with that service program code means queues a request to the node program means to synchronize that service program code means to the image, and

the node program code means includes computer readable program code means for synchronizing the service to the image.

Claim 6 (original): The program product of claim 1, wherein:

the service program code means each include a computational phase during which it operates upon the object attributes and during which the write queue program code means queues the write requests generated by the service program code means during the computational phase; and

the write requests queued for a particular service program code means are processed by the node program code means during a write request processing phase that is outside the computational phase.

Claim 7 (original): The program product of claim 4, wherein the at least some of the service program code means which the node program code means notifies includes service program code means that are associated with the object attributes represented by the node image.

Claim 8 (currently amended): A method executed by a computer to accomplish a simulation, comprising:

a plurality of service steps that collectively determine simulated attributes of objects of an environment under simulated operation wherein the objects are mechanical systems operating in the environment, each service step associated with at least a subset of object attributes in an object database and each service step executing at a rate independent of the other service steps wherein the rate is based on the simulated attributes, at least some of the service steps including steps to access and operate upon object attributes, from the object database, with which the service step is associated;

a write queue computer step associated with each service step that queues write requests from the service step to write determined simulated attributes to the object database; and

a node step that coordinates execution of the queued requests to cause the determined simulated attributes to be written to the object database in a manner such that each service step has a

coherent view of all the object attributes.

Claim 9 (original): The method of claim 8, wherein

the node step includes a step of creating an image of at least a portion of an object whose attribute is to be written to the object database and of writing the determined simulated attributes to the image; and

to write the determined simulated attributes of the object to the object database, the node step associates the image with the object database.

Claim 10 (original): The method of claim 9, wherein:

the node step associates the image with the object database by changing a pointer for the object in the object database to point to the image.

Claim 11 (original): The method of claim 9, wherein:

the node step includes a step of notifying at least some of the service steps that the node step is associating an image with the object database.

Claim 12 (original): The method of claim 11, wherein:

in response to a service step receiving an object database association notification from a node step, the write queue step associated with that service step queues a request to the node step to synchronize that service step to the image, and

the node step includes a step of synchronizing the service to the image.

Claim 13 (original): The method of claim 8, wherein:

the service steps each include a computational phase during which it operates upon

the object attributes and during which the write queue step queues the write requests generated by the service step during the computational phase; and

the write requests queued for a particular service step are processed by the node step during a write request processing step that is outside the computational step.

Claim 14 (currently amended): The method of claim 11, wherein [[the]] at least [[some]] one or more of the service steps which have been modified by the node step notifies includes service steps that as recited in claim 11, are associated with the object attributes represented by the node image.